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AIRTOUCH™
Communications

**Donna L. Bethea**
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NOV 15 1996

Federal Communications Commission
Office of Secretary

November 15, 1996

**EX PARTE**

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, NW, Room 222
Washington, DC 20554

RE: Amendment of the Commission's Rules to Provide for Unlicensed NII/SUPERNet Operations in the 5 GHz Frequency Range (ET Docket No. 96-102)

Dear Mr. Caton:

On Thursday, November 14, 1996, Mike Kozlowski and I, on behalf of AirTouch Communications, met with Thomas Tycz, Harold Ng, Karl Kensinger, and Joseph Heaps to discuss issues relating to this proceeding. Please associate the attached material with the above-referenced proceeding.

Two copies of this notice are being submitted to the Secretary of the FCC in accordance with Section 1.1206(a)(1) of the Commission's Rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me at 202-293-4957 should you have any questions or require additional information concerning this matter.

Sincerely,

Donna L. Bethea

Attachment

cc: Joseph Heaps
Karl Kensinger
Harold Ng
Thomas Tycz

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# AIRTOUCH COMMUNICATIONS, INC.

## Amendment of the Commission's Rules to Provide for Unlicensed NII/SUPERNet Operations in the 5 GHz Frequency Range

## (ET Docket No. 96-102)

Kathleen Q. Abernathy
Donna L. Bethea
Michael A. Kozlowski
November 14, 1996

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# Background on MSS

| | |
|---|---|
| June 1991 | Globalstar Submits Mobile Satellite Service (MSS) Applications. |
| WARC - 1992 | The US Achieves International Allocation of MSS Service Link Spectrum in the 2 GHz Band. |
| Early 1993 | The FCC and Industry Begin Working Toward the International Allocation of MSS Feeder Link Spectrum. |
| | The FCC Begins the Licensing Process for the Big Leo Service Link Spectrum; Feeder Link Spectrum Awaits International Allocation. |
| May 1995 | WinForum and Apple Petition the FCC for a Rulemaking to Allocate the 5 GHz Band and Adopt Service Rules for a Shared Unlicensed Personal Radio Network. |
| WRC - 95 | The US Industry and Government are Successful in Winning a Global Allocation of MSS Feeder Link Spectrum in the 5091-5250 MHz Band. |

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# NPRM Proposal

- Allocation of 350 MHz of the 5 GHz Band to Support the Operation of Unlicensed, Short-Range, High Speed Wireless Communications
- Adoption of a 100 mW EIRP Limit
- Listen Before Talk Protocol
- Adoption of a "Safe Harbor" Rule for Part 15 Devices

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# Proposed Solution Summary

In the 5150 - 5250 MHz band:

- **NO** Outdoor Use
- Adoption of a 100 mW Limit stated as an EIRP Density
- Maximum Duty Cycle Limit of 10%
- No "Safe Harbor" Rule for Part 15 Devices

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# Proposed Solution

- **NO** Outdoor Use
  - Ban outdoor use for 5150 - 5250 MHz band.
  - Prohibit weatherproofing and provide other deterrents to outdoor use.
  - Base station will not enable transmissions from mobile units which attempt to operate outdoors, via an agreed reliable detection mechanism.

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# Proposed Solution (continued)

- Adoption of a 100 mW Limit stated as an EIRP Density
  - For the 5150 - 5250 MHz band, limit EIRP to 100 mW for a 10 MHz channel.
  - For any channel bandwidth, limit maximum burst-peak transmit EIRP to 10 dBmi/MHz or 24 dBmi, whichever is less.
  - Devices use random channel selection to distribute users more evenly over all channels.
  - Specify device out-of-band emissions specified (on the order of -10 to -20 dBc).

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# Proposed Solution (continued)

- Maximum Duty Cycle Limit of 10%
  - ❑ Implement listen-before-talk.
  - ❑ Prohibit continuous transmissions by limiting transmitter on/off time ratio to below 10% in every 1 second period.
  - ❑ Generously meets duty cycle expectations of all anticipated applications proposed.
  - ❑ Use an efficient air interface protocol.

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# Proposed Solution (continued)

- No "Safe Harbor" Rule for Part 15 Devices
  - Section 301 of the Communications Act requires that a transmitting device which has a potential for causing interference must be licensed.
  - Unlicensed Part 15 devices have no spectrum allocation status, but rather have a secondary status only:

    "Persons operating intentional or unintentional radiators shall not be deemed to have a vested or recognizable right to continue use of any given frequency..." (47 C.F.R. 15.5(a) (1995))
  - These devices are prohibited from causing harmful interference to and must accept interference from licensed radio services:

    "Operation of an intentional, unintentional, or incidental radiator is subject to the conditions that no harmful interference is caused and that interference must be accepted that may be caused by the operation of an authorized radio station..." (47 C.F.R. 15.5(b))

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# Summary

- Development of Globalstar system is near completion.
  - ❑ Most design parameters have been finalized.
  - ❑ Significant changes are not feasible.
- Key parameters of SUPERNet devices must be established to reduce interference into NGSO MSS feeder links.
- Proposed "Safe Harbor" rule is inconsistent with the Telecommunications Act and does not ensure protection against harmful interference for licensed users by unlicensed devices.